



The Interstate at 50

TALK ON SURVEYING SHORT COURSE

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The Highway Commission invited six of their assistant resident engineers to teach the survey course. I was one of them. Since our normal duties did not require classroom teaching ability a one week meeting was held to teach us the basic tools of instructing and to acquaint us with the curricula.

The first part of the week was spent in studying ways in which people learn and the methods of teaching which aid this learning. Such topics as creating interest, relating the new material to previous experience, memorization, reasoning, and the basic steps in teaching were discussed. In addition some time was spent in studying types of tests, proper use of tests and reasons for testing.

During the latter part of the week the class organization, field work, and classroom work was discussed. The group of 64 men was divided into three groups, two groups of 20 men and one group of 24 men. Two teachers were assigned to each group. Each instructor was to teach one half day, thereby having the other one half day for preparation, correcting, and grading.

Within each group the men were divided into four man parties for the field work. The various duties in the field work were rotated among the men in each party thereby assuring that all men had contact with all phases of the work. In the field work and in the classroom work emphasis was placed on Highway Commission methods and procedures thereby simulating on the job conditions.

In the classroom work each individual normally worked alone. The presentation of new ideas to the men was at a rapid rate and many subjects were returned to when time was available. Quizzes and night problems were common in addition to the final and midterm examinations. Nineteen quizzes in the ten weeks were given by me to Class B as an example.

The individuals who made up the classes had varied backgrounds. Their ages varied from boys just out of high school to men of forty. Some were employees of less than four months. Others were semi experienced instrumentmen. Some were office boys. Others had been acting as rodmen or inspectors. Their educational background varied from no more than sophomore grade in high school through freshmen in college.

Mathematical studies of the men ranged from business arithmetic in high school to college trigonometry. The majority had been exposed to first year high school algebra but few had studied geometry.

The enthusiasm of the group was very high. This enabled the teachers to present the material without the added duty of creating interest in the work. The attitude of the men was excellent and they realized they were attending to work and learn.

The group as a whole learned the material very satisfactorily. A few of the men grasped the material presented rapidly. Others were not so fortunate. Some applied principles previously learned to new material while others memorized each subject. The progress of each man was checked in the field and in the classroom. The final

examination in my group of twenty men produced three perfect papers and fourteen of the twenty men had 90 percent or above.

The purpose of the course was to produce junior instrumentmen. The end result will be determined in the field not in the classroom. Most of the material presented in the class was understood by most of the men though possibly not retained. The ability to find the information needed for a surveying job was learned by the students. Most of the graduates of the school needed more field experience before being given the responsibility of party leadership. Those with previous experience should be qualified to execute most of the surveying work assigned to them.

Within a period of 9 ½ weeks, we crammed a major part of three quarters of surveying. Most of the information would take five years field experience to come in contact with. This course provided the background on which the men can progress with the Highway Commission.

